

Waste Management Plan

FOR

PRJ-1109086

Black Mountain Ranch

North Village

Prepared for:

The Cambridge School

12855 Black Mountain Rd

San Diego, CA 92129

Contact: Scott Kim

T 858-484-3488

campusproject@cambridgeclassical.org

Prepared by:

Atlantis Group Land Use Consultants

2488 Historic Decatur Road, Suite 220

San Diego, California 92106

Telephone: 619-523-1930

Email: neck@atlantissd.com

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1.0 Introduction

The purpose of this Waste Management Plan (WMP) for *Cambridge School* (Project) in the City of San Diego is to provide analysis of the solid waste impacts anticipated for the project. The goal of this WMP is to identify sufficient measures to minimize potential impacts of *Cambridge School* on solid waste services such that significant impacts are avoided. Two acceptable approaches to managing waste are to reduce the tons disposed to 60 tons or less, or to provide diversion of 75 percent or more, thus meeting the goal established by Assembly Bill 341.

The Project consists of one building on one 6.52-acre parcel, located at the intersection of Camino del Sur and Coyote Bush Dr. with the Associated Parcel Numbers 678-690-70-00, 678-690-71-00 and 678-690-72-00. *Figure 1 Cambridge School – Project Location Map* is a location map of the site. The project site is currently undeveloped. The surrounding properties are all developed with various commercial uses. *Figure 2 Cambridge School – Project Location Aerial* is an aerial view of the site

The proposed project is on a 284,011 sq ft parcel and will house a maximum of 652 students with an estimated 26 classrooms, a 12,369 sq ft administrative office, and a field deck and multipurpose building/gym that will seat 351 occupants. The buildings come to a collective 264,538 sq ft. The project is in a CC-4-5 zone and Mobility Zone 4 and will need a conditional use permit. *Figure 3 Cambridge School – Site Plan* is the proposed site plan.

This WMP consists of two sections corresponding to the implementation of site development: The Construction Phase (to include demolition, if any) and the Occupancy Phase (post-construction). The WMP addresses the projected amount of waste that could be generated by the project based on current City generation rates and estimates; waste reduction goals; and recommended techniques to achieve the waste reduction goals, such as recycling and composting of organic waste. The construction of the project is anticipated to take approximately 12-18 months. Construction is estimated to begin mid-2026.

Waste disposal sites and recycling methods and opportunities may change from those available today; however, it is not expected that waste diversion and disposal sites listed in *Table 3 Cambridge School Waste Generation – Construction* would change by the time the project is anticipated to begin construction. This WMP includes the following general information known at the time the WMP was prepared:

- Projected waste generation calculations and identification of types of waste generated;
- Source separation techniques for waste generated;
- How materials will be re-used on-site;
- Name and location of current recycling, re-use, and landfill facilities where waste will be disposed of if not re-used on-site;
- A “buy recycled” program;
- Measures to be implemented directed at reducing construction debris;
- Method(s) for communicating waste reduction and recycling goals to subcontractors;
- A general timeline for construction and development; and
- A list of required progress and inspections by City staff, based on current ordinances.

Figure 1 Cambridge School- Project Location Map

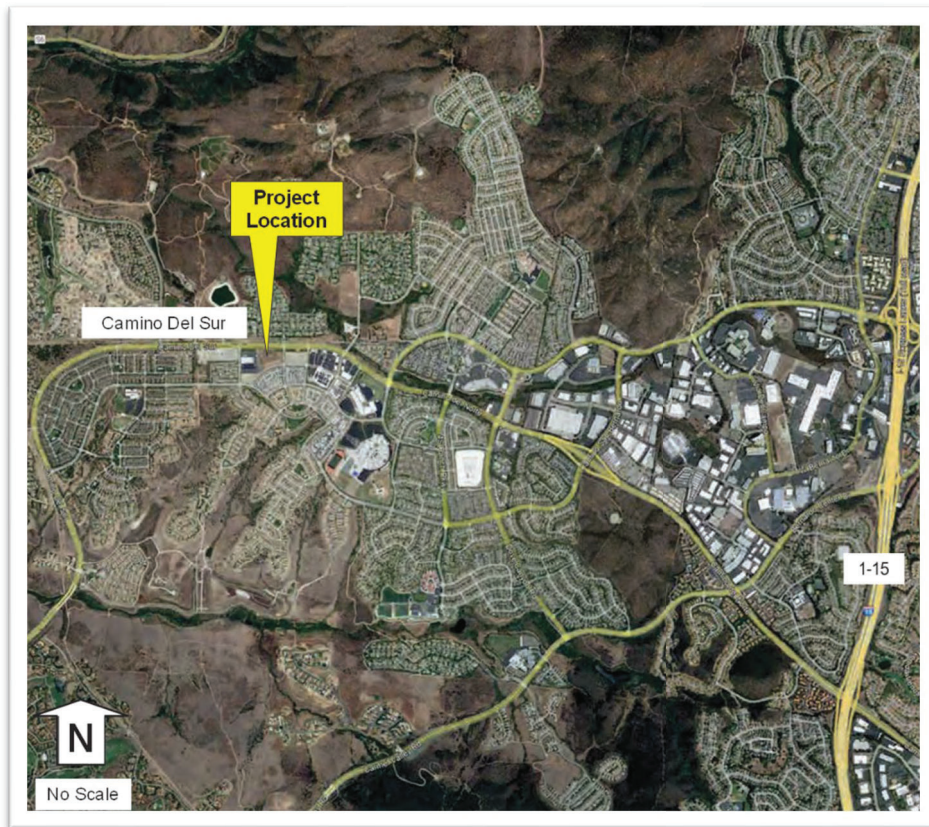
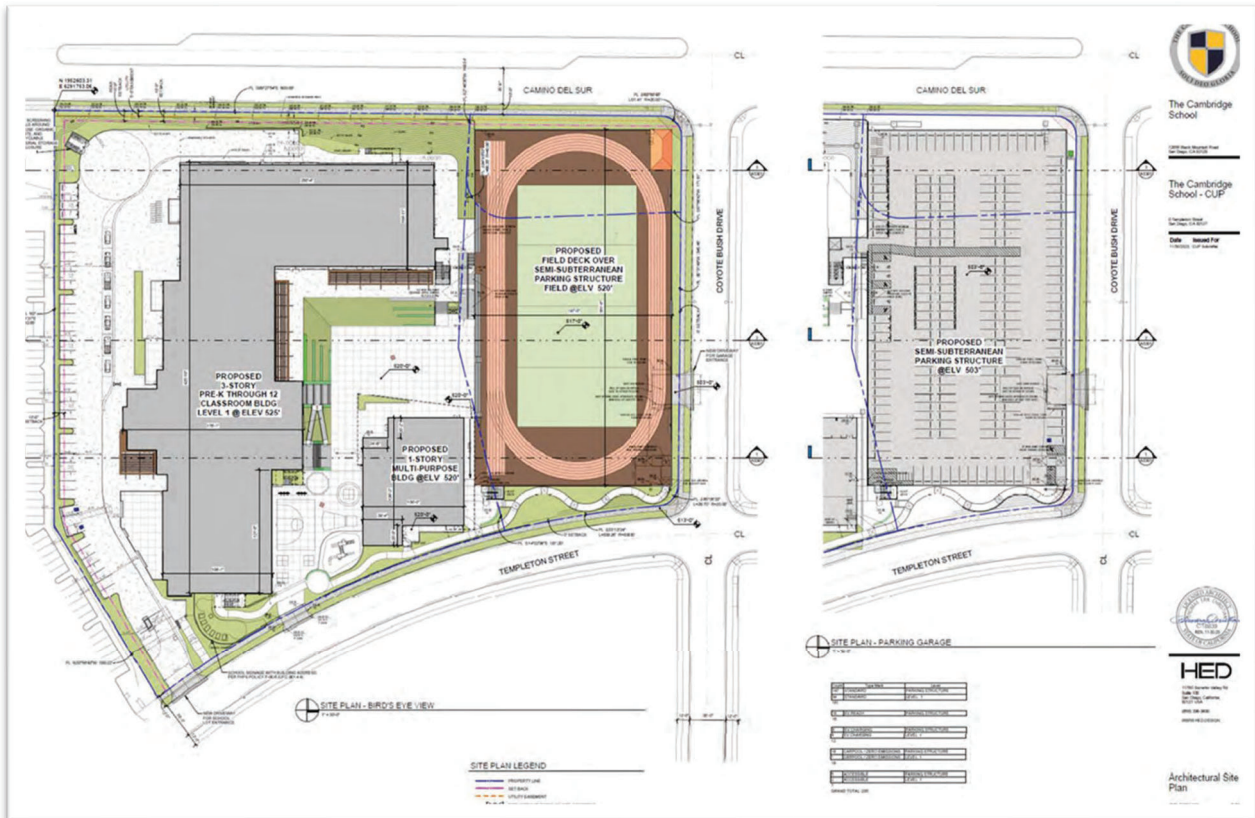


Figure 2 Cambridge School – Project Location Aerial



Figure 3 Cambridge School – Site Plan



2.0 Background

In 1989, the California Legislature passed Assembly Bill (AB) 939: Integrated Waste Management Act, which mandated that all cities reduce waste disposed in landfills from generators within their borders by 50 percent by the year 2000. AB 939 required all local governments to prepare a Source Reduction and Recycling Element, which incorporates waste management policies and programs to achieve the mandated waste reduction. Since 1990, the City has diverted more than 50 percent of its generated waste stream from disposal. This bill specified that solid waste should be considered by the equation $\text{GENERATED} = \text{DISPOSED} + \text{DIVERTED}$. “Diverted” materials are put into a *hierarchy* in the law, as follows:

- First *source reduction*, such as using a reusable bag, making double-sided copies, or other measure that stops waste at the source.
- Secondary measures include *recycling* and *composting*. Because these measures often have transportation and processing impacts, they are considered less preferable than source reduction.
- In the Public Resources Code, various methods of *transformation* for energy production are limited to ten percent of the total waste reduction target.

In 2008, SB 1016 was chaptered. Known as the Solid Waste Disposal Measurement Act, SB 1016 maintained the 50 percent diversion requirement, but changed to a disposal-based measurement system, expressed as the 50 percent Equivalent Per Capita Disposal Target. This built upon AB 939 by implementing a simplified and timelier indicator of jurisdiction performance that focuses on reported disposal at Board-permitted disposal facilities. This established a goal of not recycling more but disposing of less. AB 341: Jobs and Recycling, chaptered in 2011, was intended to create green jobs by expanding recycling to every multi-family dwelling and business. It charged CalRecycle with responsibility for ensuring that the State is diverting at least 75 percent of solid waste that is generated within the State by 2020. SB 1016 establishes that compliance with State law is measured by reducing the amount of waste material requiring disposal, and AB 341 increases the diversion target to 75 percent.

Senate Bill 1383 (SB 1383) (2016) requires a 50 percent reduction in disposal of organic waste from the 2014 level by 2020, and a 75 percent reduction by 2025. The law grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that not less than 20 percent of currently disposed edible food be recovered for human consumption by 2025. Effective January 1, 2022, SB 1383 requires all generators statewide to reduce organic waste that is disposed of in landfills. All residents and commercial businesses are now required to separate their organic waste for organic waste recycling. Organic waste recycling is the recycling of organic material - food scraps, food-soiled paper and yard waste.

Additional local regulation pertaining to solid waste management includes the City of San Diego's Municipal Code Ch.14 Art. 2 Div. 8: §142.0810, §142.0820, Ch. 6 Art. 6 Div. 7; §66.0706, §66.0709, §66.0710; and Ch. 6 Art. 6 Div. 6; §66.0711, §66.0604, §66.0606. These statutes designate refuse and recycling space allocation requirements for:

- on-site refuse and recyclable material storage requirements,
- diversion of construction and demolition debris regulations, and
- diversion of recyclable materials generated from residential facilities, businesses, commercial/institutional facilities, apartments, condominiums, and special events requiring a City permit.

The City of San Diego has established a threshold of 40,000 square feet of development as generating sufficient waste (60 tons) to have a potentially cumulatively significant impact on solid waste services. *Cambridge School* as proposed exceeds this threshold. The purpose of this WMP is to identify measures that would be implemented to reduce this potential solid waste impacts such that significant impacts are avoided.

The City Recycling Ordinance is found in Municipal Code section 66.0701 et. seq. It requires the provision of recycling service for all single-family residences; and commercial facilities and multifamily residences with service for four cubic yards or more. In addition, the ordinance also requires development of educational materials to ensure occupants are informed about the City's ordinance and recycling services including information on types of recyclable materials accepted.

Construction and Demolition (C&D) Debris Diversion Deposit Program applies to all applicants for building, demolition, and removal permits. This ordinance requires that the applicant post a deposit (*Table 1 Construction and Demolition Debris Deposit Table*). The deposit is not returned until the

applicant demonstrates that a minimum amount of the material generated has been diverted from disposal in landfills. Mixed construction debris recycling facilities in San Diego are evaluated quarterly to determine how much of the throughput is recycled, and how much is a “residual” material requiring disposal. Facilities that accept mixed debris typically achieve a 68 percent or less diversion rate. Single materials recyclers, such as metal recyclers, often achieve a nearly 100 percent diversion rate. When comingled materials are sent to a mixed facility, the 75 percent diversion goal established by AB 341 will not be met. Depending on the project, to ensure that the overall diversion goal is attained, some materials must often be separated and trucked to facilities with higher diversion rates, such as aggregate and metal recyclers.

Table 1 Construction and Demolition Debris Deposit Table

Building Category	Sq. Ft. Subject to Ordinance*	Deposit per Sq. Ft.	Range of Deposits
Residential New Construction	500-125,000 detached 500-100,000 attached	\$0.40	\$200-\$50,000 \$200-\$40,000
Non-residential New Construction	1,000-25,000 commercial 1,000-75,000 industrial	\$0.20	\$200-\$5,000 \$200-\$15,000
Non-residential Alterations	286 with no maximum	\$0.70	\$200 and up
Residential Demolition	286 with no maximum	\$0.70	\$200 and up
Non-residential Demolition	1,000 with no maximum	\$0.20	\$200 and up
Roof Tear-off	All projects	-	\$200
Residential Alterations	500 and above	-	\$1,000

*Projects under the minimum square footage subject to the ordinance are exempt from the C&D debris recycling deposit.

2.1 Exterior Refuse and Recyclable Material Storage Area Requirements

Cambridge School would develop in one phase over an approximate 12-18 month period. Development is anticipated to begin mid-2026. As *Cambridge School* consists of institutional development, Exterior Refuse, Recyclable Material, and organic Waste storage areas will be provided in accordance with City regulations per Chapter 14, Article 2, Division 8: Refuse and Recyclable Material Storage Regulations, §142.0820 and §142.0830.

2.2 Exterior Refuse, Recyclable Material and Organic Waste Storage Areas for Cambridge School

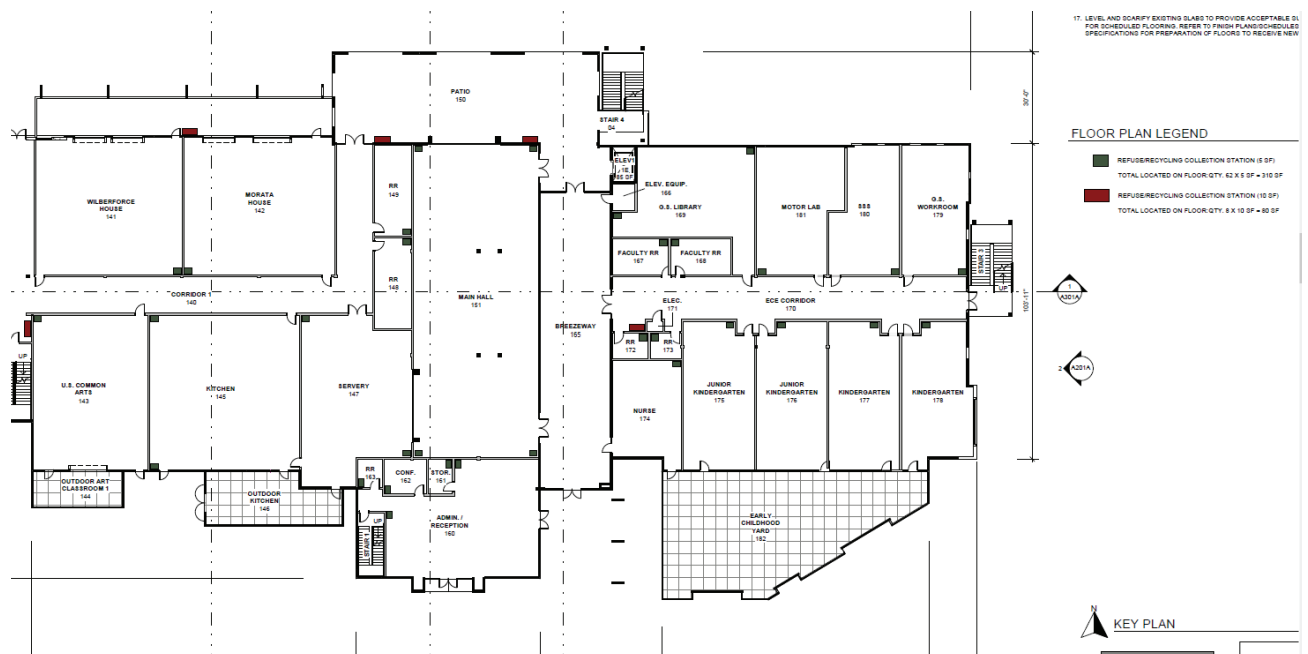
Cambridge School would develop a school that's 264,538 sq ft *Table 2 Minimum Exterior Refuse, Organic Waste, and Recyclable Material Storage Areas for Non-Residential Development* shows the required amount of refuse and recyclable storage areas for the project's commercial element. As shown in *Table 2*, the project would be required to provide 509 sq ft each of exterior refuse, recyclable material, and organic waste storage area, for a total of 1,527 square feet of material storage area.

Table 2 Minimum Exterior Refuse, Organic Waste, and Recyclable Material Storage Areas for Non-Residential Development

Gross Floor Area Per Development (Square Feet)	Minimum Refuse Storage Area Per Development (Square Feet)	Minimum Recyclable Material Storage Area Per Development (Square Feet)	Minimum Organic Waste Storage Area Per Development (Square Feet)	Total Minimum Area Per Development (Square Feet)
0-5,000	12	12	12	36
5,001-10,000	24	24	24	72
10,001-25,000	48	48	48	144
25,001-50,000	96	96	96	288
50,001-75,000	144	144	144	432
75,001-100,000	192	192	192	576
100,001+	192 plus 48 square feet for every 25,000 square feet of building area above 100,001	192 plus 48 square feet for every 25,000 square feet of building area above 100,001	192 plus 48 square feet for every 25,000 square feet of building area above 100,001	576 plus 144 square feet for every 25,000 square feet of building area above 100,001

See Figures 4 and 5 below.

Figure 4 Cambridge School – Level 1 Dedicated Storage Area



5.0 Demolition and Construction Waste

The site is currently undeveloped and will not require any demolition in the building process. The construction of the site will take place over a period of approximately 12-18 months. ESD staff would be present for an early pre-construction meeting to evaluate waste segregation, signage, and salvage.

5.2 Construction

In accordance with State diversion targets, a minimum of 75 percent of construction materials will be recycled. Materials to be recycled would be redirected to appropriate recipients selected from ESD's directory of facilities that recycle demolition materials, scrap metal, and yard waste. *Cambridge School* will target 85 percent recycled materials.

Table 3 Cambridge School Waste Generation – Construction is included below to summarize the types of waste generated, the approximately amount of each waste type diverted, and the approximate overall amount remaining to be disposed of in landfills. Construction waste processing facilities that may be used for any of the construction phases include but are not limited to those facilities listed in *Table 4*. Because certified diversion rates and authorized facilities are updated quarterly and the decision on which facility will be contracted for waste hauling will be made at the time of construction based on market conditions and the facility's certified rate, the developer reserves the right to select any authorized facility as long as the facility is City-certified to meet minimum diversion requirements.

The City of San Diego Environmental Services Department requires projects to estimate tonnage of expected construction waste. As provided by Environmental Services Department and for purposes of this WMP, *Cambridge School* utilizes the Environmental Protection Agency (EPA), 3.0 pounds of waste per square foot for waste generation on demolition debris and new construction to calculate expected tonnage:

$$264,538 \text{ sq ft} \times 3.0/2,000\text{lbs} = 396.8 \text{ tons}$$

Table 3 Estimated Construction Waste Generated and Percent Diverted shows the projected calculations for the construction of the project.

Table 3 Estimated Construction Waste Generated and Percent Diverted

Land Use	Square Feet	EPA Generation Rate (pounds per square foot)	Tons Generated	Percent Diverted	Tons Diverted	Tons Disposed
Institutional	264,538	3.0	396.8	85%	337.28	59.52

Note: 396.8 tons is an assumption and is used as a placeholder until further detail is provided and the hired contractor can accurately assess expected waste.

Table 4 Cambridge School Waste Generation – Construction

Material Type	Estimated Waste Quantity (tons)	Handling	Estimated Diversion (tons)	Estimated Disposal (tons)
CONSTRUCTION WASTE				
Asphalt and Concrete	103.2	Hanson Aggregates 9229 Harris Plant Road San Diego, CA 92126 (100% diversion)	103.2	--
Brick/Masonry/Tile	43.6	Vulcan Carroll Canyon Landfill and Recycle Site 10051 Black Mountain Road San Diego, CA 92126 (100% diversion)	43.6	--
Paper/Cardboard	11.9	Allan Company 6733 Consolidated Way San Diego, CA 92121 (100% diversion)	11.9	--
Carpet, Padding/Foam	4	DFS Flooring 10178 Willow Creek Road San Diego, CA 92131 (100% diversion)	4	--
Drywall	27.8	EDCO Station Transfer and Buy Back Center 8184 Commercial Street La Mesa, CA 91942 (70% diversion)	19.46	8.34
Landscape Debris	7.9	Miramar Greenery 5180 Convoy Street San Diego, CA 92111 (100% diversion)	7.9	--
Mixed C&D Debris	39.7	Otay C&D/Inert Debris Processing Facility 1700 Maxwell Road Chula Vista, CA 91913 (76% diversion)	30.2	9.5
Roofing Materials	11.9	LEED Recycling 8725 Miramar Place San Diego, CA 92121 (100% diversion)	11.9	--
Scrap Metal	11.9	Allan Company 6733 Consolidated Way San Diego, CA 92121 (100% diversion)	11.9	--
Unpainted Wood & Pallets	95.2	Miramar Greenery 5180 Convoy Street San Diego, CA 92111 (100% diversion)	95.2	--
Garbage/Trash	39.7	Miramar Landfill 5180 Convoy Street San Diego, CA 92111 (0% diversion)	--	39.7
TOTAL	396.8	85.07% Diversion	339.26	57.54

Construction debris will be separated onsite into material-specific containers, corresponding to the material types in *Table 4*, to facilitate reuse and recycling and to increase the efficiency of waste reclamation. *Cambridge School* will implement a target of 15 percent recycled material and 85 percent for landfill diversion.

6.0 Occupancy Phase

While the construction phase for *Cambridge School* occurs as a one-time waste generation event as construction of the project proceeds, tenant occupancy requires an on-going plan to manage waste disposal to meet the waste reduction goals established by the City and State.

6.1 Solid Waste Recycling

Table 5 Minimum Exterior and Recyclable Material Storage Areas for Cambridge School expresses the anticipated refuse and recyclable storage requirements based on Table 142-08B and 142.08C of the City of San Diego Municipal Code.

Table 5 Minimum Exterior and Recyclable Material Storage Areas for Cambridge School

Land Use	Gross Floor Area/Units	Minimum Refuse Storage Area (square feet)	Minimum Recyclable Material Storage Area (square feet)	Minimum Organic Waste Storage Area (square feet)	Total Minimum Storage Area (square feet)
Institutional	264,538 sq ft	509	509	509	1,527

Cambridge School would be required to provide a minimum of 509 sq ft refuse storage area, recyclable material storage area and organic waste storage area for a total of 1,527 square feet of minimum exterior refuse and recyclable material storage area.

As shown in *Table 6 Estimated Solid Waste Generation from Cambridge School – Occupancy Phase*, the expected generated waste per year from *Cambridge School* when fully occupied would be approximately 660.68 tons

Table 6 Estimated Solid Waste Generation from Cambridge School – Occupancy Phase

Land Use	Intensity	Waste Generation Rate	Estimated Waste Generated (tons/year)	Expected Percent Diverted from Source-Separated Recycling	Estimated Diverted (per year)	Estimated Disposed (per year)
Student Per day	653 students	5lbs per student per day	Students tons	50	297.95	297.95
Employees Per day	100 employees	3.55 per employee per day	Employees 64.78 tons a year	50	32.39	32.39
Total					330.34	330.34

The project will contract City approved recycling and organic waste haulers and disposal facilities for the recycling of recyclable materials and the disposal of organic waste. In order to achieve a 50% diversion rate during occupancy, the project will implement the below measures.

On-site recycling service bins shall be provided at *Cambridge School* and the on-site operator shall participate in a recycling program by separating recyclable materials from other solid waste and depositing the recyclable materials in the recycling container provided for the occupants. Recycling services are required by Section 66.0707 of the City of San Diego Land Development Code. Based on current requirements, these services shall include the following:

- Collection of recyclable materials as frequently as necessary to meet demand;
- Collection of plastic bottles and jars, paper, newspaper, metal containers, cardboard, and glass containers;
- Collection of other recyclable materials for which markets exist, such as scrap metal, wood pallets;
- Collection of food waste for recycling by composting (prior to issuance of building and occupancy permits, the project proponent will meet with representatives from ESD to ensure that their educational materials and haulers can comply with the requirements for this service);
- Use of recycling receptacles or containers which comply with the standards in the Container and Signage Guidelines established by the City of San Diego Environmental Services Department;
- Designated recycling collection and storage areas will be at each single-family residence; and signage on all recycling receptacles, containers, chutes, and/or enclosures which complies with the standards described in the Container and Signage Guidelines established by the City of San Diego Environmental Services Department

As required by Section 66.0707 of the City of San Diego Land Development Code, the building management or other designated personnel shall ensure that occupants are educated about the recycling services as follows:

- Information, including the types of recyclable materials accepted, the location of recycling containers, and the occupant's responsibility to recycle shall be distributed annually;
- All new occupants shall be given information and instructions upon occupancy; and
- All occupants shall be given information and instructions upon any change in recycling service to the commercial facility.

The project shall also implement the following long-term WMP measures to minimize its disposal of waste:

- The responsible person shall provide on-site recycling services to occupants as required by the dates prescribed in the City Municipal Code Chapter 6, Article 6, Division 7, Section 66.0706c.
- Occupants of multifamily residential facilities which receive solid waste collection services from a franchisee, shall participate in a recycling program by separating recyclable material from other solid waste and depositing the recyclable materials in the recycling container provided by the Franchisee or Recyclable Materials Collector (City Municipal Code Chapter 6, Article 6, Division 7, Section 66.0706d).
- At a minimum, multifamily residential facilities' recycling services would include the following (City Municipal Code Chapter 6, Article 6, Division 7, Section 66.0706e): (1) Collection of recyclable materials at least two times per month. (2) Collection of plastic bottles and jars, paper, newspaper, metal containers, cardboard, and glass containers. (3) Utilization of recycling receptacles which comply with the standards in the Container and Signage Guidelines established by the City ESD or its successor. (4) Designated recycling collection and storage areas. (5) Signage on all recycling receptacles, containers, chutes, and/or enclosures which comply with the standards described in the Container and Signage Guidelines established by the City ESD or its successor.
- Occupant Education – For multifamily residential facilities, the responsible person shall ensure that occupants are educated about the recycling services as follows (City Municipal Code Chapter 6, Article 6, Division 7, Section 66.0706f): (1) Information, including the types of recyclable materials accepted, the location of recycling containers, and the occupants' responsibility to recycle, shall be distributed to all occupants annually. (2) All new occupants shall be given information and instructions upon occupancy. (3) All occupants shall be given information and instructions upon any change in recycling service to the facility.

6.2 Landscaping and Green Waste Recycling

With regard to organics, the project would contract with competitively selected vendors to haul both green waste and pre-consumer food waste from the residential uses and the commercial uses for the ground floor retail space, if applicable, to commercial facilities. These facilities accept pre-consumer food scraps diverted from the waste stream along with some paper products from food-serving

operations (e.g., coffee filters, parchment paper, kitchen paper towels, etc.). Food waste from proposed commercial uses, if applicable, would be collected in food bins to be placed in exterior custom-made bins for collection. The material would be hauled by contracted waste service. Senate Bill 1383 requires that businesses subscribe to an organic waste collection service that either “source separates” the waste (e.g., separate bins) or transports all unsegregated waste to a facility that recovers 75 percent of the organic content collected from the system, this project intends to conform to this requirement.

Plant material selection will be guided by the macro-and micro-climate characteristics of the project site and surrounding region to encourage long-term sustainability without the excessive use of water, pesticides, and fertilizers. Irrigation of these areas, where practical, will utilize reclaimed water applied via low precipitation rate spray heads, drip emitters, or other highly efficient systems. Landscape maintenance provided by the building management would include the collection of green waste and disposal of green waste at recycling centers that accept green waste. This will help further reduce the waste generated by developments within *Cambridge School* project after construction.

7.0 Conclusion

The project proposes construction of an estimated 264,538 sq ft of building area, thus exceeding the City’s threshold for cumulative solid waste impacts without implementation of solid waste diversion measures. The City of San Diego Development Services Department is requiring that this Waste Management Plan (WMP) be prepared and submitted to the City of San Diego’s Environmental Services Department.

This WMP includes a timeline for the demolition and construction phases; estimates of wastes that may be generated during the demolition, construction, and occupancy of the project and where such wastes may be taken for disposal, reuse, or recycling; discussion of waste reduction measures and education, and details of operational refuse and recyclables storage. Additionally, this WMP discusses how the project will comply with City ordinances and State regulations. Complying with the WMP and these ordinances and regulations will ensure that the project impacts related to solid wastes will be at a level that is less than significant.

This WMP will be implemented to the fullest degree of accuracy and efficiency. Additionally, the project will be required to adhere to City ordinances, including the Construction and Demolition Debris Diversion Deposit Program, the City’s Recycling Ordinance, and the Refuse, Organic Waste, and Recyclable Materials Storages Regulations. This plan for *Cambridge School* is designed to implement and adhere to all city ordinance and regulations with regards to waste management. The measures in the WMP would ensure that significant impacts relative to solid waste are avoided.

Implementation of this WMP involves an 88% diversion rate for demolition waste and a 85% diversion rate for construction waste. The proposed project will result in the generation of approximately 660.68 tons of waste annually with 50% of it being diverted the project would dispose of 330.34 tons of waste annually. The property will provide sufficient refuse and recycling containers and education to comply with City ordinances and provide sufficient waste diversion.

First, the project exceeds ordinance C&D requirements and even the State waste reduction target during construction. Second, the project includes landscaping that will reduce yard waste, and will provide transportation to a composting facility for the yard waste that is produced. Third, The project will ensure that ESD reviews the landscaping plans and hauling contract for the facility to verify that waste reduction goals are met.

These measures ensure that the waste generated by the project will be properly managed and that solid waste services will not be impacted. Implementation of a project-specific WMP would reduce the project's cumulative portion of impacts on solid waste, as, per the City's California Environmental Quality Act (CEQA) Significance Determination Thresholds, the implementation of a WMP would ensure that the overall waste produced is reduced sufficiently to comply with waste reduction targets.